System Configuration Team (SCT)

Reasonable & Prudent Measure #26
Meeting Notes
February 22, 2001

Greetings and Introductions.

The February 22 meeting of the System Configuration Team was held at NMFS' Portland offices. The meeting was chaired by Bill Hevlin of NMFS and facilitated by Donna Silverberg. The agenda and a list of attendees for the February 22 meeting are attached as Enclosures A and B.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

1. Comments on November and December SCT Meeting Notes.

Hevlin asked if there were any comments on the November and December draft meeting notes, which were distributed at the January meeting. He distributed the January draft meeting notes and asked for comments by the March 15 SCT meeting. Hevlin also distributed copies of a recent letter from Reclamation's Monte McClendon to BPA describing the formation of the SCT subcommittee to project Grand Coulee power loads during future 7-day, 10-year high flow events; this basically memorializes what we discussed last meeting, he said.

2. Development of B1 Decision Document.

John Kranda distributed Enclosure C, a memo updating the SCT on progress in the development of the Bonneville decision document; Doug Clarke provided a brief report on this topic. We have agreed on the input to the SIMPAS model and resulting project survival estimates, he said; we are currently assessing the risks of various routes of passage. Clarke

reminded the SCT participants that, if they are participating in the B1 subgroup, their comments on the latter point are due by close of business tomorrow, February 23.

Clarke continued on through Enclosure C, noting that:

- The Corps needs to advertise by March 15 in order to make a 2003 completion date if B1 JBS is the selected alternative
- The next B1 decision document meeting is scheduled for February 27; items to be discussed at that meeting include the letter from CRITFC, the states and the Fish and Wildlife Service concerning the partial deep slot alternative previously eliminated from consideration, risk assessments, annualized cost and benefit information and whether or not the group has reached agreement on the recommended alternative.
- Clarke noted that, at the last meeting of the subgroup, it was agreed to continue to push for a decision, but most participants felt it wasn't realistic to complete this process by March 15.
- Clarke said he plans to provide information from the February 27 subgroup meeting to the ISRP to help their review of the capital portion of the reimbursable program. A briefing and Bonneville site visit have been tentatively scheduled for March 13.
- Among the factors that need to be taken into account in making a decision by March 15: is B1 JBS the right decision for Bonneville? Should the decision be made before the prioritization process laid out in the BiOp? What is the CRFM funding situation relative to other measures to ensure that we don't impact other items that may have a higher priority?

The group devoted a few minutes of discussion to the B1 decision process, and possible avenues the subgroup might use to reach its decision by March 15. Clarke discussed various ways to narrow down the range of options still under consideration at Bonneville, including continued investigation of only alternatives that will yield at least 97% project survival or only those with acceptable benefit/cost ratios. Neither of those approaches was acceptable to the subgroup, said Clarke; instead, we plan to use the risk approach combined with a cost/benefit analysis. We will let each participant develop their own rankings, he said; we will then get together as a group, combine all of those scores and discuss the results in an attempt to reach consensus.

In response to a question from Bruce Suzumoto, Clarke said it might be possible for the schedule to slip to the third week of March, but the contract advertisement for the B1 JBS cannot slip any further than that if construction is to be completed by 2003. If B1 JBS is not the chosen option, said Clarke, then that date won't matter. If B1 JBS is the recommended alternative, but we miss the deadline, all that will mean is that construction won't be complete until 2004.

Is funding risk a part of your deliberations? Suzumoto asked. Our first priority is to decide what's best for Bonneville, biologically, Clarke replied. Once that process is complete, we will be working with John Kranda to assess the funding situation and how the B1

improvements fit in with other CRFM priorities. That will be part of the SCT's job, Kranda observed – we will need to assess what we'll be giving up if we commit funding to the

Bonneville improvements now vs. later. Steve Rainey observed that costs for the Bonneville project will be something of a wild card, because we'll be doing things at that project we've never done before.

Hevlin said it would be helpful, from an SCT perspective, if the Corps could produce a series of charts showing how each alternative stacks up from a survival standpoint, a risk and uncertainty standpoint, a cost/benefit standpoint etc. – in other words, he said, a series of ranked lists by the various analytical perspectives the subgroup is using. Clarke said it should be possible for the Corps to produce such assessments.

Hevlin requested another update on this topic at the March 15 SCT meeting; he also asked Clarke to provide the draft decision document to him prior to that so that he can distribute it to the SCT in advance of the meeting.

3. Update on Plan for ISRP Review of Capital Portion of the Reimbursement Program.

Suzumoto distributed Enclosure D, a memo, dated February 14, from him to the ISRP members laying out questions and context for the ISRP's review of the Corps reimbursable program. He noted that the ISRP's assignment in this review, which begins this month, is to review and evaluate the Bonneville Dam decision document and recommended actions for consistency with the criteria set forth in Section 4(h)(10)(D) of the Pacific Northwest Electric Power Planning and Conservation Act and the criteria and strategies contained in the Council's 2000 Columbia River Basin Fish and Wildlife Program. The second part of the ISRP's task will be to review the system configuration and capital construction portions of the action agencies' one- and five-year implementation plans.

Does the ISRP have time to work on this right now? Hevlin asked. They have set aside a window for this review from now through the end of March, Suzumoto replied. The group discussed the utility of setting up a briefing for the ISRP on the SIMPAS model and the inputs used to model the Bonneville alternatives; there was general agreement that this would be useful for the ISRP, and that the March 13 meeting at Bonneville might be the best time to make it. Suzumoto agreed to send out an email reminder about the March 13 meeting at Bonneville.

4. Lower Granite RSW – Update.

At the last SCT meeting, we learned that construction on the RSW was seven weeks behind schedule and that it wouldn't be possible to evaluate it this year, said Hevlin. At the last Walla Walla District FFDRWG meeting on January 25, said Kevin Crum, we discussed a variety of coordination and construction matters associated with getting the RSW support structures in place this year. To accomplish that we need to extend the in-water work window through March 31. The extension was tentatively approved at the meeting.

Other items discussed at the January 25 meeting included the fact that the RSW is being built in Portland and will need to be floated upriver in order to be plugged into the face of the dam, said Crum. We are now projecting that the RSW will be ready to attach on spillbay one by June 20, he said, after the conclusion of this year's spill program, at which point we have tentative approval to actually attach the RSW to the face of the dam. NMFS has told us that, if juvenile fish numbers are still high, it may be necessary to delay that installation, Crum said.

In response to a question from Hevlin, Steve Pettit said the salmon managers' intent is to err on the conservative side, biologically; at this point, he said, we don't know how the low-flow conditions this year will affect the outmigration, but based on data from past low-flow years, we could be looking at a protracted outmigration in 2001. We're also a little concerned about the post-installation hydraulic testing and its affects on the summer migration, Pettit said. Hevlin and Rainey observed that the hydraulic test could occur at any time, even in August, once the vast majority of summer migrants have passed.

Mike Mason observed that it may make sense to ask the contractor to delay delivery of the RSW until early July. Crum replied that July would probably be worse, from the standpoint of summer juvenile migrants; the intent of the June 20 date was to take advantage of the expected lull between the spring and summer outmigrations. Given the uncertainties about passage timing this year, as well as the concern about low number of Snake River migrants in 2001, FPAC felt we should err on the conservative side and design the installation around fish numbers, said Christine Mallette. The only concern is that the longer we delay, the higher the cost will be, Crum replied.

Rod Woodin said that, in his view, the risks associated with trying to accomplish the RSW installation in June are unacceptable; to him, it would make more sense to delay installation until late August, to avoid the risks associated with spilled fuel and other construction activities. Crum replied that work has been ongoing at Lower Granite for years without a fuel spill accident; the Corps is concerned about the increased cost associated with such a delay in installation. Crum added that fuel pans will be in place for the crane and tugboat used in the operation; the contractor will also have emergency fuel containment systems in place. Mike Mason added that tugs traverse that section of river every day.

Ultimately, Pettit said that, if the Corps is willing to abide by the precautions outlined in the FPAC letter, the June installation date can probably proceed. We intend to abide by those precautions, Mason replied.

The other topic of conversation at the January 25 meeting was what kind of monitoring and evaluation to do this year, said Crum; there was general agreement that it would be useful to obtain some baseline data about how fish approach the dam, as well as tailrace conditions during spill this year, before the RSW begins operating in 2002. The concern, of course, is that the flow

situation is continuing to decline in the Snake; it may not even be possible to spill at all this year. Crum said the Corps would like to set up a meeting to discuss potential evaluations at Lower

Granite this year; a decision needs to be made about whether or not to purchase radio tags. Pettit replied that there is little point to this; BPA has been telling the region repeatedly that the chances for spring spill in the Snake are remote at best.

There are other things besides spill that we could monitor, however, Hevlin said – FGE between occluded and non-occluded units, for example, as well as other aspects of fish behavior under low-flow conditions. Tim Wick observed that the Corps already has contracts in place to conduct hydroacoustic and radio-telemetry studies at Lower Granite this year. After a few minutes of discussion, Rainey suggested that a special AFEP meeting be scheduled to discuss ways to assess fish behavior under low-flow conditions at Lower Granite. I have trouble supporting that, Pettit replied; we aren't going to have many management options this year, given the fact that Dworshak is unlikely to be more then 20 to 30 feet from full. The real problem is movement through a 20-mile reservoir, not passage through the near-field in front of the dam, he said. Rainey disagreed, saying that if no monitoring is done this year, a significant opportunity will be lost. Suzumoto agreed with Rainey, adding that any information obtained this year could at least be useful from a mitigation standpoint later.

Rock Peters observed that this is obviously a systemwide SRWG issue; the situation at Lower Granite needs to be discussed in the context of evaluations at all of the projects in the system. Ultimately, Suzumoto said this issue merits additional discussion. Peters said he will talk to Rebecca Kalamasz and Tim Wick about convening a special SRWG meeting to discuss potential ways to evaluate fish behavior during low-flow conditions. Pettit suggested that it probably makes sense to wait until after next Thursday's IT/TMT meeting before convening that special meeting; on Thursday, we may finally get a better picture of whether or not we will see any spill or special operations for research at all in the Snake this spring, he said. There was general agreement that waiting to see what, realistically, may be possible this year probably does make sense. In the interim, Peters asked the other SCT participants to think about where the uncertainties lie in low flow years, and what types of evaluations might help resolve those uncertainties.

5. The Dalles Sluiceway Outfall/AWS Combined System.

Kranda distributed Enclosure E, an update on The Dalles sluiceway outfall and auxiliary adult attraction water supply, dated February 21. He spent a few minutes going through this document:

- Outfall/Auxiliary Water Design report is 90% complete
- The January trip to WES confirmed suspicions that outfall plume egress conditions do not appear to be satisfactory under several river conditions tested.
- Sluiceway guidance in 2000 at 40% spill was 6% for spring and 11% for summer juveniles. Previous studies indicated about 43% sluiceway guidance during periods of no spill.
- Sluiceway survival in 2000 was 95% for spring and 89% for summer juveniles.

- "J" shaped trashrack blocks to be tested in 2001, which are intended to decrease turbine passage and increased sluiceway and/or spillway passage.
- The current plan is to document work to date on the current outfall design and re-look at potential alternative outfall sites. Initial scoping efforts have concentrated on sites farther downstream than the current site, with and without dewatering facilities or spillway deflectors and possibly considering a wider range of spill volumes.
- Plans and specifications for the outfall/AWS system will not commence in FY'01, as previously anticipated.
- Several factors could impact the decision regarding outfall/AWS construction, including the results of the "J" frame trashrack block analysis, anticipated spill levels in the future, the results of the spillway deflector study, possible reduced emphasis on adult attraction backup water supply, the success of predation control efforts at The Dalles and the cost of alternatives.

In other words, said Kranda, in many ways we're back to square one on this design; there will be at least a one-year delay while we re-evaluate the outfall site.

6. The Dalles Spillway Survival Investigation – Update.

Mike Langslay of the Corps distributed Enclosure F, a summary of the 2001 The Dalles Dam survival study. He explained that the goals of the 2001 test include the following:

- ***Characterize the spillway environment*** by a) describing the environment fish experience during passage in spill and b) visualizing and further analyzing fish exposure conditions
- ***Estimate direct mortality and injury rates*** by a) assessing the feasibility of estimating direct mortality and injury rates using balloon-tagged yearling and subyearling chinook that pass the spillway, b) estimating mortality and injury rates of balloon-tagged yearling and subyearling chinook that pass the spillway (2002) and c) estimating mortality and injury rates of balloon-tagged juvenile salmonids that pass through a tuned and painted turbine unit vs. an untuned, unpainted turbine unit
- ***Estimate juvenile salmonid travel paths through the stilling basin*** by a) determining passage routes through the stilling basin for fish passing one north and one south spillbay and b) determining stilling basin retention time for fish passing one north and one south spillbay.
- ***Estimate indirect mortality rates*** by a) estimating the survival of spring and summer migrants that pass the ice and trash sluiceway (2001), b) assessing the feasibility of obtaining survival estimates for radio-tagged juvenile salmonids passing different stilling basin routes (direct downstream passage vs. northward lateral transport along the stilling basin, 2001) and, c), if feasible, estimating survival rates for fish that are released from a south spillbay and travel northward prior to exiting the stilling basin, fish that are released from a south spillbay and travel directly downstream through the stilling basin,

and fish released from a north spillbay (2002).
- ***Synthesize existing passage data*** by synthesizing all previous juvenile salmonid passage

research conducted at The Dalles Dam into one report.

- ***Explore mechanistic relationships between dam passage and operations with predation sources of mortality*** by continuing to develop and refine spatially explicit models that output the probability of habitat use by northern pikeminnow, smallmouth bass and juvenile salmonids in The Dalles Dam tailrace under different operational scenarios.

Langslay said the test fish will be released through a hose at the south spill bay, to provide travel path and retention time data. The group devoted a few minutes of discussion to the technical nuances of the planned survival test in 2001. Basically, if we can identify a mechanistic problem or a problem with lateral flow, we can fix it, Langslay said – if the main problem is predation, we'll take a different approach.

What will the sensor fish will give you? Hevlin asked. A measurement of the physical environment – turbulence, velocity, acceleration, the shear environment etc., Rock Peters replied. We would also like to do another year of indirect mortality estimates through the use of radio-tagged juveniles, Langslay added.

What about tailrace predator behavior? Hevlin asked. We plan to compile the existing data before making a decision about how much more we need to do in that area, Langslay replied. And has the multi-year study plan been developed yet? Hevlin asked. Many of these study components cover multiple years, Langslay replied. In response to a request, Langslay said he will provide copies of the 2001 study proposal to Hevlin as soon as it is available.

Suzumoto observed that 2001 will provide an opportunity to study project survival during very low-flow conditions; he asked whether any special components have been added to the survival study to take advantage of this opportunity. We have been talking about that sort of a proactive approach, Peters replied, but we have not yet begun to solicit research projects targeting that issue. The group also discussed the likely impact of the potential reduction in the 2001 spring spill program due to low runoff volume; Peters observed that, if little or no spill occurs, it will be difficult to conduct a spillway survival study.

7. FFDRWG Update.

Hevlin reported that, at the most recent Walla Walla FFDRWG meeting, the majority of the agenda was devoted to a discussion of the Lower Granite RSW. Also, he said, the model has been constructed to help design the four end-bay deflectors and the new spring spill pattern at McNary. A WES trip to evaluate these factors was set for early March, but may be deferred. Hevlin added that the cost of the McNary deflectors has now increased by $500,000. The meeting participants also touched on the Little Goose and Lower Monumental deflector design processes, and the need for spillway erosion repairs at Lower Monumental. There probably won't be any spill at Lower Monumental this spring, said Rainey, but without those repairs, it is

unlikely that it will be possible to spill at Lower Monumental in 2002. Hevlin noted that Rebecca Kalamascz has requested that NMFS, the states and tribes write letters of support for

early repair of the erosion damage at Lower Monumental to the Corps' Division Engineer.

Other topics covered at the Walla Walla FFDRWG meeting included the McNary cylindrical dewatering prototype testing; McNary collection channel bulkheads, ESBS perf plate replacements at McNary, Little Goose and Lower Granite; Ice Harbor and Lower Monumental AWS (Ice Harbor contract to be advertised in March); separator improvements at McNary, and McNary less-intrusive PIT-tag detection.

The group devoted a few minutes of discussion to the latter topic; Kevin Crum said Walla Walla District is under the impression that any technical challenges can be overcome, and the intent, at this point, is to move forward with the design. Woodin said there has been some discussion in the Mid-Columbia forum of the need to implement diversion by code at McNary if transport is implemented at McNary this year; my understanding is that the less-intrusive PIT-tag detection system would not allow for diversion by code. This would be in lieu of transport, Steve Pettit replied.

Peters reported that there has been no Portland District FFDRWG meeting since the last SCT meeting; the date of the next Portland District FFDRWG meeting is March 27 at Portland District headquarters, beginning at 9 a.m.

8. AFEP Studies Update.

This topic was not covered during today's meeting.

9. Next SCT Meeting Date.

The next meeting of the System Configuration Team was set for Thursday, March 15. Additional SCT meetings were set for April 19 and May 17. Meeting notes prepared by Jeff Kuechle, BPA contractor.